

I. IDENTIFICATION DATA

Thesis title:	Effect of Neutron Irradiation on Concrete Aggregates
Author's name:	Syrym Sertayev
Type of thesis :	master
Faculty/Institute:	Faculty of Civil Engineering (FCE)
Department:	Department of Concrete and Masonry Structures
Thesis reviewer:	Mgr. Yuliia Khmurovska, Ph.D.
Reviewer's department:	Department of Concrete and Masonry Structures

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment	challenging
<i>How demanding was the assigned project?</i>	
The topic of the master thesis is complex and challenging since the work on this topic demands the basic knowledge not only in the civil engineering field, but also in neighboring areas such as advanced materials, crystallography, radiochemistry, etc.	

Fulfilment of assignment	fulfilled with minor objections
<i>How well does the thesis fulfil the assigned task? Have the primary goals been achieved? Which assigned tasks have been incompletely covered, and which parts of the thesis are overextended? Justify your answer.</i>	
The master thesis gives limited information regarding the numerical analysis of radiation-induced deterioration of aggregates. However, it should be noted that such an analysis may be extremely complicated due to the high number of influencing parameters and the limited related knowledge base.	

Activity and independence when creating final thesis	B - very good.
<i>Assess whether the student had a positive approach, whether the time limits were met, whether the conception was regularly consulted and whether the student was well prepared for the consultations. Assess the student's ability to work independently.</i>	
The student is able to work independently, however, the student needs to improve his time-management skills.	

Technical level	A - excellent.
<i>Is the thesis technically sound? How well did the student employ expertise in his/her field of study? Does the student explain clearly what he/she has done?</i>	
The experimental part of the master thesis is of extremely high technical level since it describes the advanced experiments with real irradiated materials.	

Formal level and language level, scope of thesis	A - excellent.
<i>Are formalisms and notations used properly? Is the thesis organized in a logical way? Is the thesis sufficiently extensive? Is the thesis well-presented? Is the language clear and understandable? Is the English satisfactory?</i>	
The master thesis is well written. I have no comments regarding the formal and the language level. The state-of-art is written in detail and maybe even too much in detail.	

Selection of sources, citation correctness	A - excellent.
<i>Does the thesis make adequate reference to earlier work on the topic? Was the selection of sources adequate? Is the student's original work clearly distinguished from earlier work in the field? Do the bibliographic citations meet the standards?</i>	
The used sources are relevant, and the bibliographic citations style is correct. The student took advantage of his knowledge of Russian language and thus he used a lot of rare but extremely relevant sources.	

Additional commentary and evaluation (optional)

Comment on the overall quality of the thesis, its novelty and its impact on the field, its strengths and weaknesses, the utility of the solution that is presented, the theoretical/formal level, the student's skillfulness, etc.

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III. OVERALL EVALUATION, QUESTIONS FOR THE PRESENTATION AND DEFENSE OF THE THESIS, SUGGESTED GRADE

The topic and the assignment of the master thesis are considered as challenging. Even though the assignment of the master thesis was fulfilled with minor objections, the student did a great job in terms of literature review, advanced experimental investigation, and related analyses.

The grade that I award for the thesis is **A - excellent**.

Date: **31.1.2021**

Signature: